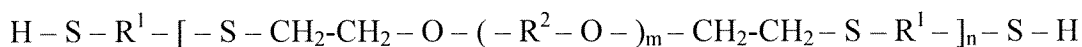


**LISTING OF THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

1-21. (Canceled).

22. (Previously presented) A polythioether comprising:



wherein

$\text{R}^1$  is selected from the group consisting of  $\text{C}_{2-6}$  n-alkylene, and a  $-[(\text{-CH}_2)_p\text{-X}]_q-$

$(\text{-CH}_2)_r-$  group;

$\text{R}^2$  is selected from the group consisting of  $\text{C}_{2-6}$  n-alkylene, and  $\text{C}_{6-8}$  cycloalkylene;

X is selected from the group consisting of O and S;

m is an integer between 0 and 10;

p is an integer between 2 and 6;

q is an integer between 1 and 5;

r is an integer between 2 and 10; and

n is an integer between 1 and 60 selected so that the molecular weight of the polythioether is between 1,000 and 10,000 Daltons.

23. (Previously presented) The polythioether of claim 22 wherein  $\text{R}^1$  is  $\text{C}_2\text{-C}_6$  n-alkylene.

24. (Previously presented) The polythioether of claim 22 where  $R^1$  is  $-[(-CH_2)_p-O-]_q-$   
 $(-CH_2)_r-$  where r, p, and q are 2.
25. (Previously presented) The polythioether of claim 22 wherein  $R^2$  is  $C_2$  alkylene.
26. (Previously presented) The polythioether of claim 22 wherein the molecular weight of said polythioether ranges from about 2000 to about 5000 Daltons.
27. (Previously presented) The polythioether of claim 22 having an atomic percentage ratio of C:S:O of 35-49 : 20-60 : 0-20.
- 28-30. (Canceled)
31. (Previously presented) A mixture of polythioether polymers comprising:  
a polythioether polymer having the formula  
$$B- \{ -S-R^1- [ -S-CH_2-CH_2-O-(R^2-O)_m-CH_2-CH_2-S-R^1 ]_n-S-H \}_z$$
  
wherein  
 $R^1$  is selected from the group consisting of  $C_{2-6}$  n-alkylene, and a  $-[(-CH_2)_p-X]_q-$   
 $(-CH_2)_r-$  group;  
 $R^2$  is selected from the group consisting of  $C_{2-6}$  n-alkylene, and  $C_{6-8}$  cycloalkylene;  
X is selected from the group consisting of O and S;  
m is an integer between 1 and 10;  
p is an integer between 2 and 6;

q is an integer between 1 and 5;

r is an integer between 2 and 10;

z is an integer from 3 to 6;

B is a z-valent group of a polyfunctionalizing agent; and

n is an integer between 1 and 60 selected so that the molecular weight of the polythioether is between 1,000 and 10,000 Daltons.

32. (Previously presented) The polythioether mixture of claim 31 wherein z is 3.
33. (Previously presented) The polythioether mixture of claim 31 wherein the mixture has an average functionality between 3 and 4.
34. (Previously presented) The polythioether mixture of claim 31 wherein the average functionality is between 2.05 and 3.00.
35. (Previously presented) A curable composition comprising:  
40 to 80 weight percent of a polythioether polymer according to claim 22,  
10 to 50 weight percent of a filler and 10 weight percent of a curing agent.
36. (Previously presented) The curable composition of claim 35 further comprising one or more additives selected from the group consisting of: pigments, cure accelerators, adhesion promoters, thixotropic agents and isopropyl alcohol.

37-40. (Canceled).

41. (Previously presented) The polythioether of claim 22, wherein  $r$  is an integer between 2 and 6,  $R^2$  is  $C_{2-6}$  n-alkylene, and  $m$ ,  $p$  and  $q$  are each 2.

42. (Previously presented) The polythioether mixture of claim 31, wherein,  $r$  is an integer between 2 and 6,  $R^2$  is  $C_{2-6}$  n-alkylene, and  $m$ ,  $p$  and  $q$  are each 2.

43. (Previously presented) A curable composition comprising: 40 to 80 weight percent of a polythioether polymer according to claim 41, 10 to 50 weight percent of a filler and 10 weight percent of a curing agent.

44. (Previously presented) The curable composition of claim 43 which includes from about 0.1 to about 5 weight percent based upon the total weight of formulation of fumed silica.

45. (Previously presented) The curable composition of claim 43 wherein the filler comprises carbon black.

46. (Previously presented) The curable composition of claim 43 wherein the filler comprises calcium carbonate.

47. (Previously presented) A curable composition comprising: 40 to 80 weight percent of a polythioether polymer according to claim 22, 10 to 50 weight percent of a filler, and 90% to about 150% of the stoichiometric amount of a curing agent based upon -SH equivalents.

48. (Currently amended) The curable composition of claim ~~46~~ 47 which comprises about 47 weight percent polythioether polymer, about 0.7 weight percent of amorphous silica, about 34 weight percent calcium carbonate, and about 7 weight percent curing agent, based on the total weight of the composition formulation.